## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

- 1. (Currently Amended) A method for producing a porous sintered body of a calcium phosphate-based ceramic having a porosity of 80 % or more, wherein said method comprises: (1) preparing a slurry comprising a calcium phosphate-based ceramic powder, a water-soluble high molecular compound and a nonionic surface active agent; (2) stirring said slurry vigorously to froth said slurry; (3) solidifying the frothed slurry into a gel; (4) degreasing a green block having a predetermined shape formed from said gel to remove said water-soluble high molecular compound and said nonionic surface active agent from the gel by heating at 300 to 900°C; and (4) (5) drying and sintering said green block after degreasing gel, wherein said slurry is stirred at 5 to 20 °C to froth said slurry.
- 2. (Original) The method for producing a porous sintered body according to claim 1, wherein said calcium phosphate-based ceramic powder is a secondary particle having an average particle diameter of 0.5 to 80 µm prepared from a primary particle having an average particle diameter of 100 nm or less.
- 3. (Original) The method for producing a porous sintered body according to claim 1, wherein said water-soluble high molecular compound is a cellulose derivative.
- 4. (Original) The method for producing a porous sintered body according to claim 1, wherein said nonionic surface active agent is a fatty acid alkanolamide surface active agent.

- 5. (Original) The method for producing a porous sintered body according to claim 1, wherein 1 to 10 part by weight of said water-soluble high molecular compound and 1 to 10 part by weight of said nonionic surface active agent are used with 100 parts by weight of said calcium phosphate-based ceramic powder.
- 6. (Original) The method for producing a porous sintered body according to claim 1, wherein a weight ratio of the total of said calcium phosphate-based ceramic powder, said water-soluble high molecular compound and said nonionic surface active agent is 20 to 50 weight % based on 100 weight % of said slurry.
- 7. (Original) The method for producing a porous sintered body according to claim 1, wherein said slurry is stirred under a stirring condition of 50 W/L or more to froth said slurry.
  - 8. (Canceled)
- 9. (Original) The method for producing a porous sintered body according to claim 1, wherein said nonionic surface active agent is free of a metal ion and a sulfate group.
- 10. (Original) The method for producing a porous sintered body according to claim 1, wherein said slurry is stirred while passing a gas through said slurry to froth said slurry.
- 11. (Original) The method for producing a porous sintered body according to claim 1, wherein said calcium phosphate-based ceramic is hydroxyapatite.
- 12. (Currently Amended) A method for producing a porous sintered body of a calcium phosphate-based ceramic having a porosity of 80 % or more, wherein said method comprises: (1) preparing a slurry comprising a calcium phosphate-based ceramic powder, a water-soluble high molecular compound and a nonionic surface active agent; (2) stirring said slurry vigorously to froth said slurry; (3) solidifying the frothed slurry into a gel; and (4) drying and sintering said

gel, wherein said slurry is stirred at 5 to 20 °C to froth said slurry, and wherein said nonionic surface active agent is N, N-dimethyldodecylamine oxide.

13. (New) The method for producing a porous sintered body according to claim 1, wherein the gel is dried prior to degreasing.